

Claims

1. An unauthorized apparatus detection device for detecting an unauthorized apparatus produced by copying, comprising:

5 a distribution unit operable to store a first verification value in correspondence with a verification apparatus identifier, generate a second verification value that differs from the first verification value, store the second verification value in place of the first verification value, and distribute the second verification value to an apparatus that is storing the verification apparatus identifier;

an acquiring unit operable to acquire from a portable medium a target apparatus identifier and a verification value that have been written to the portable medium by a detection target apparatus;

15 a judging unit operable, if the target apparatus identifier matches the verification apparatus identifier, to judge whether or not the acquired verification value matches the second verification value; and

20 a registering unit operable, if the judging unit judges negatively, to register the target apparatus identifier on an unauthorized apparatus list.

2. The unauthorized apparatus detection device of Claim 1, wherein

25 if the judging unit judges affirmatively, the distribution unit is further operable to generate a third verification value that differs from the second verification value, store the third verification value in place of the second verification value, and

distribute the third verification value to the detection target apparatus.

3. The unauthorized apparatus detection device of Claim 1,
5 further comprising:

a title key storage unit operable to store a title key for decrypting encrypted content, wherein

if the judging unit judges affirmatively, the distribution unit further distributes the title key to the detection target
10 apparatus.

4. The unauthorized apparatus detection device of Claim 2, the detection target apparatus storing therein a private key, the unauthorized apparatus detection device further comprising:

15 a title key storage unit operable to store a title key for decrypting encoded content;

a duplicate key storage unit operable to store, in correspondence with the verification apparatus identifier, a duplicate key that is a copy of the private key; and

20 an encrypted title key generation unit operable to encrypt the title key using the duplicate key to generate an encrypted title key, wherein

if the judging unit judges affirmatively, the distribution unit further distributes the encrypted title key to the detection
25 target apparatus.

5. The unauthorized apparatus detection device of Claim 1, further comprising:

a counting unit operable to count a number of affirmative judgments by the judging unit; and

a count judging unit operable to judge whether the total number of affirmative judgments exceeds a predetermined number, wherein

5 if the total number exceeds the predetermined number, the distribution unit is further operable to generate a third verification value that differs from the second verification value, replace the first verification value with the third verification value, and distribute the second verification value to the detection target
10 apparatus.

6. The unauthorized apparatus detection device of Claim 1, further comprising:

a period measuring unit operable to measure a period since
15 a last verification value distribution by the distribution unit; and

a period judging unit operable to judge whether the total period exceeds a predetermined period, wherein

if the total period exceeds the predetermined period, the
20 distribution unit is further operable to generate a third verification value that differs from the second verification value, replace the second verification value with the third verification value, and distribute the third verification value to the detection target apparatus.

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7. The unauthorized apparatus detection device of Claim 1, wherein

the distribution unit is operable to generate a random number

to use as each verification value.

8. A content playback device for performing playback of content, comprising:

5 a storage unit operable to store, in correspondence with an apparatus identifier, a first verification value generated by an unauthorized apparatus detection device for detecting an unauthorized apparatus produced by copying;

10 a notification unit operable to notify the unauthorized apparatus detection device of the apparatus identifier and first verification value;

 an acquiring unit operable to acquire from a portable medium an apparatus identifier and a second verification value that have been written, in response to the notification, on the portable medium
15 by the unauthorized apparatus detection device, the second verification value having been generated by the unauthorized apparatus detection device; and

 an update unit operable, if the acquired apparatus identifier matches the apparatus identifier stored in the storage unit, to replace
20 the first verification value with the second verification value.

9. An unauthorized apparatus detection system for detecting an unauthorized apparatus produced by copying, including an unauthorized apparatus detection device and a plurality of detection
25 target apparatuses,

 each detection target apparatus comprising:

 a storage unit operable to store a first verification value in correspondence with a target apparatus identifier;

a notification unit operable to notify the unauthorized apparatus detection device of the target apparatus identifier and the first verification value;

an update information acquiring unit operable to acquire, from
5 the unauthorized apparatus detection device, a verification apparatus identifier and a second verification value that is generated by the unauthorized apparatus detection device; and

an update unit operable, if the verification apparatus identifier matches the target apparatus identifier, to replace the
10 first verification value with the second verification value, and the unauthorized apparatus detection device comprising:

a distribution unit operable to generate a second verification value that differs from a first verification value stored in correspondence with a verification apparatus identifier, store the
15 second verification value in correspondence with the verification apparatus identifier in place of the first verification value, and distribute the verification apparatus identifier and the second verification value to an apparatus that is storing the verification apparatus identifier;

20 an acquiring unit operable to acquire a target apparatus identifier and a verification value from any one of the detection target apparatuses;

a judging unit operable, if the received target apparatus identifier matches the verification apparatus identifier, to judge
25 whether or not the acquired verification value matches the second verification value, and

a registering unit operable, if the judging unit judges negatively, to register the target apparatus identifier on an

unauthorized apparatus list.

10. The unauthorized apparatus detection system of Claim 9,
wherein

5 the notification unit is further operable to write the target
apparatus identifier and the first verification value to a portable
medium, and

 the acquiring unit is further operable to read the target
apparatus identifier and the verification value from the portable
10 medium via an information collecting device.

11. The unauthorized apparatus detection system of Claim 10,
wherein

 the information collecting device includes:

15 a reading unit operable to read from the portable medium the
target apparatus identifier and the verification value that are
written in the portable medium; and

 a transmission unit operable to transmit the target apparatus
identifier and the verification value, and

20 the acquiring unit acquires the target apparatus identifier
and the verification value from the information collecting device.

12. An information collecting device for transmitting, to an
unauthorized apparatus detection device for detecting unauthorized
25 apparatus produced by copying, information stored by a detection
target apparatus that is a target of the detection,

 the detection target apparatus storing a target apparatus
identifier and a verification value generated by the unauthorized

apparatus detection device, and

the unauthorized apparatus detection device generating the verification value, storing the generated verification value in correspondence with a verification apparatus identifier, acquiring
5 a target apparatus identifier and a verification value, if the target apparatus identifier matches the verification apparatus identifier, judging whether the stored verification value matches the acquired verification value, and if judging negatively, registering the target apparatus identifier on an unauthorized apparatus list,

10 the information collecting device comprising:

a reading unit operable to read from the portable medium the target apparatus identifier and the verification value that have been written to the portable medium by the detection target apparatus;
and

15 a transmission unit operable to transmit the read target apparatus identifier and the read verification value to the unauthorized apparatus detection device.

13. An unauthorized apparatus detection method for detecting
20 an unauthorized apparatus produced by copying, comprising:

a distribution step of storing a first verification value in correspondence with a verification apparatus identifier, generating a second verification value that differs from the first verification value, storing the second verification value in place of the first
25 verification value, and distributing the second verification value to an apparatus that is storing the verification apparatus identifier;

an acquiring step of acquiring from a portable medium a target apparatus identifier and a verification value that have been written

to the portable medium by a detection target apparatus;

a judging step of, if the target apparatus identifier matches the verification apparatus identifier, judging whether or not the acquired verification value matches the second verification value;

5 and

a registering step of, if the judging unit judges negatively, registering the target apparatus identifier on an unauthorized apparatus list.

10 14. A computer program used in a storage unit-equipped unauthorized apparatus detection unit for detecting an unauthorized apparatus produced by copying, comprising:

a distribution step of storing a first verification value in
correspondence with a verification apparatus identifier, generating
15 a second verification value that differs from the first verification
value, storing the second verification value in place of the first
verification value, and distributing the second verification value
to an apparatus that is storing the verification apparatus identifier;

20 an acquiring step of acquiring from a portable medium a target
apparatus identifier and a verification value that have been written
to the portable medium by a detection target apparatus;

a judging step of, if the target apparatus identifier matches the verification apparatus identifier, judging whether or not the acquired verification value matches the second verification value;

25 and

a registering step of, if the judging unit judges negatively, registering the target apparatus identifier on an unauthorized apparatus list.

15. The computer program of Claim 14, wherein
the computer program is recorded on a computer-readable
5 recording medium.

16. An apparatus information update method used by a content
playback device for performing playback of content,
the content playback device including a storage unit operable
10 to store, in correspondence with an apparatus identifier, a first
verification value generated by an unauthorized apparatus detection
device for detecting an unauthorized apparatus produced by copying;
and the apparatus information update method comprising:
a notification step of notifying the unauthorized apparatus
15 detection device of the apparatus identifier and first verification
value;
an acquiring step of acquiring from a portable medium an
apparatus identifier and a second verification value that have been
written, in response to the notification, on the portable medium
20 by the unauthorized apparatus detection device, the second
verification value having been generated by the unauthorized apparatus
detection device; and
an update step of, if the acquired apparatus identifier matches
the apparatus identifier stored in the storage unit, replacing the
25 first verification value with the second verification value.

17. A computer program used by a content playback device for
performing playback of content,

the content playback device including a storage unit operable to store, in correspondence with an apparatus identifier, a first verification value generated by an unauthorized apparatus detection device for detecting an unauthorized apparatus produced by copying;

5 and the computer program comprising:

 a notification step of notifying the unauthorized apparatus detection device of the apparatus identifier and first verification value;

10 an acquiring step of acquiring from a portable medium an apparatus identifier and a second verification value that have been written, in response to the notification, on the portable medium by the unauthorized apparatus detection device, the second verification value having been generated by the unauthorized apparatus detection device; and

15 an update step of, if the acquired apparatus identifier matches the apparatus identifier stored in the storage unit, replacing the first verification value with the second verification value.

18. The computer program of Claim 17, wherein

20 the computer program is recorded on a computer-readable recording medium.

19. An integrated circuit used content playback device for performing playback of content, comprising:

25 a storage unit operable to store, in correspondence with an apparatus identifier, a first verification value generated by an unauthorized apparatus detection device for detecting an unauthorized apparatus produced by copying;

a notification unit operable to notify the unauthorized apparatus detection device of the apparatus identifier and first verification value;

an acquiring unit operable to acquire from a portable medium

5 an apparatus identifier and a second verification value that have been written, in response to the notification, on the portable medium by the unauthorized apparatus detection device, the second verification value having been generated by the unauthorized apparatus detection device; and

10 an update unit operable, if the acquired apparatus identifier matches the apparatus identifier stored in the storage unit, to replace the first verification value with the second verification value.